

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-28 (Canceled)

29. (New) A phosphonium compound embedded in a matrix substrate wherein the phosphonium compound is selected from a group consisting of tris (hydroxyorgano) phosphine (THP), a THP⁺ salt (tetrakis (hydroxyorgano) phosphonium salt) or a condensate of THP and a nitrogen containing compound, and wherein the matrix substrate has a melting point of between 5 to 80° C and is soluble in water at a temperature of between 5 to 100° C optionally of 20° C.

30. (New) The phosphonium compound as claimed in claim 29, wherein the THP⁺ salt is tetrakis (hydroxymethyl) phosphonium sulphate.

31. (New) The phosphonium compound as claimed in claim 29, wherein the THP salt is selected from the group consisting of tetrakis (hydroxymethyl) phosphonium chloride, tetrakis (hydroxymethyl) phosphonium phosphate, tetrakis (hydroxymethyl) phosphonium formate, tetrakis (hydroxymethyl) phosphonium acetate and tetrakis (hydroxymethyl) phosphonium oxalate.

32. (New) The phosphonium compound as claimed in claim 29, wherein the nitrogen containing compound is urea.

33. (New) The phosphonium compound as claimed in claim 29, wherein the nitrogen containing compound is melamine, guanidine or dicyandiamide.

34. (New) The phosphonium compound as claimed in claim 29, wherein the matrix substrate has a melting point of between 20 to 70° C, optionally of 60° C.

35. (New) The phosphonium compound as claimed in claim 34, wherein the matrix substrate is a polyhydric compound.

36. (New) The phosphonium compound as claimed in claim 35, wherein the polyhydric compound is a polyethylene glycol with a molecular weight of above 600.

37. (New) The phosphonium compound as claimed in claim 35, wherein the polyhydric compound is polyethylene glycol 8000.

38. (New) The phosphonium compound as claimed in claim 29, wherein the matrix substrate is selected from the group consisting of ethoxylated surfactants, fatty alcohols, ethoxylated fatty alcohols, ethoxylated alkyl phenols, ethoxylated fatty acids, fatty acid alkanolamides, ethylene oxide/propylene oxide block copolymers, ethoxylated/propoxylated fatty alcohols, polyethylene glycol esters, glycol esters, alkyl benzene sulphonic acids and salts thereof.

39. (New) The phosphonium compound as claimed in claim 29, wherein the matrix substrate is a mixture of two or more of the polyhydric compound as defined in claim 29.

40. (New) A method for reducing the numbers of micro-organisms in an industrial system which method comprises the step of contacting the industrial system with an effective amount of phosphonium compound as defined in claim 29 to reduce the number of micro-organisms.

41. A method for reducing the amount of scale in an industrial system which method comprises the step of contacting the industrial system with an effective amount of a phosphonium compound as defined in claim 29 to reduce the amount of scale.

42. (New) A formulation comprising a phosphonium compound as defined in claim 29 and one or more of the following: scale inhibitors, corrosion inhibitors, additional biocides, demulsifiers, gas hydrate inhibitors, asphaltene inhibitors/dispersants, other surfactants, anti- foams/defoamers, fragrances, wax inhibitors, scale dissolvers, gelling agents, oxygen scavengers.

43. (New) Sticks/candles, beads, pellets, bricks, shavings, flakes or prills comprising a phosphonium compound as defined in claim 29.